Common Core Standards - Resource Page

The resources below have been created to assist teachers' understanding and to aid instruction of this standard.

Domain	**Standard:** F.BF.3-1 - Identify the effect on the graph of replacing f(x) by f(x) + k, kf(x), f(kx), and f(x + k) for specific values of k (both positive and negative) and find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include linear, exponential, quadratic, and absolute value functions.
Building Functions **Build new functions from existing functions**	Questions to Focus Learning How does multiplying by and/or adding a constant to a function change the graph? The location and value of a constant within a function affects its graph. A function may be translated or dilated by introducing a constant into the function. Student Friendly Objectives *Knowledge Targets* I can identify graphs of parent functions. I can identify translations of functions from a graph and/or table. *Reasoning Targets* I can determine the value of k when given the graphs of the original function and a transformation. I can identify the transformation to the graph of a function when a constant k is added to or multiplied by the original function. I can use technology to determine the transformation to the graph of a function when a constant k is added to or multiplied by the original function. *Performance Targets*

	Vocabulary constant dilation parent function reflection transformation translation Teacher Tips Vertical Progression F.BF.3-2 - Identify the effect on the graph of replacing f(x) by f(x) + k, kf(x), f(kx), and f(x + k) for specific values of k (both positive and negative) and find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them. Include simple radical, rational, and exponential functions, note the effect of multiple transformations on a single graph, and emphasize common effects of transformations across function types.

The above information and more can be accessed for free on the Wiki-Teacher website.
Direct link for this standard: F.BF.3-1